

REMARKS

Claims 1 and 3-7 are pending in this application.

Claims 1 and 3 have been amended. It is respectfully submitted that no new matter has been added.

Claims 4- 7 have been canceled without prejudice.

REJECTION UNDER 35 U.S.C. § 112:

Claim 7 stands rejected for the reason stated on page 2 of the Final Office Action. The rejection is moot since claim 7 has been canceled.

CLAIM OBJECTIONS:

Claims 4 and 6 stand objected to for the reasons stated on page 2 of the Final Office Action. The objections are moot since claims 4 and 6 have been canceled.

REJECTIONS UNDER 35 U.S.C. § 103:

Reconsideration is respectfully requested of the rejections of claims 1 and 3-7 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Pub. No. US2003/0094239 A1 to Quon et al. (“Quon”) in view of U.S. Patent Pub. No. US2003/0049558 to Aoki et al. (“Aoki”).

Applicants respectfully submit that neither Aoki nor Quon discloses or suggests outputting an unbranched mixed voltage of a main voltage, a bias voltage and an auxiliary voltage to one of a lower electrode and an upper electrode, as essentially recited in amended claim 1.

The Examiner recognizes that Quon does not disclose an auxiliary power source. See page 5 of the Office Action. Thus, it follows that Quon does not disclose outputting

an unbranched mixed voltage of a main voltage, a bias voltage and an auxiliary voltage to one of a lower electrode an upper electrode.

Applicants respectfully submit that Aoki does not cure the deficiency of Quon. The Examiner states that “it would have been obvious to one of ordinary skill in the art at the time of the invention to mix power from three matching networks and supply mixed power to one of the electrodes as taught by Aoki in the apparatus of Quon to achieve improved evenness of standing wave suppression effect”. However, in contrast to claimed embodiments, in Aoki the mixed voltage is divided into six directions and is applied to six high frequency electrodes (103) for plasma generation. See Figs. 14A and 14B. In other words, in Aoki the mixed voltage is branched.

Thus, even assuming, arguendo, that Quon and Aoki were combined, the combination does not disclose or suggest outputting an unbranched mixed voltage of a main voltage, a bias voltage and an auxiliary voltage to one of a lower electrode and an upper electrode, as essentially recited in amended claim 1.

As such, Applicants respectfully submit that claim 1 is patentable over Quon in view of Aoki.

Claim 1 is allowable for additional reasons. Applicants submit that neither Quon, Aoki, nor any combination thereof discloses a bias frequency being lower than a main frequency, as claimed in claim 1. The lower bias frequency facilitates the control of heavy particles.

Further, for at least the reason that claims 3 and 5 depend from claim 1, claims 3 and 5 are also submitted to be patentably distinct over the cited references. Claims 4, 6 and 7 have been canceled.

Reconsideration is respectfully requested of the rejections of claims 1 and 3-7 under 35 U.S.C. § 103(a) as being unpatentable over JP Pub. No. 2002-246368 to Wikuramanayaka in view of Aoki.

Applicants respectfully submit that neither Wikuramanayaka nor Aoki discloses or suggests outputting an unbranched mixed voltage of a main voltage, a bias voltage and an auxiliary voltage to one of a lower electrode and an upper electrode, as essentially recited in amended claim 1.

The Examiner recognizes that Wikuramanayaka does not disclose an auxiliary power source. See page 7 of the Office Action. Thus, it follows that Wikuramanayaka does not disclose outputting an unbranched mixed voltage of a main voltage, a bias voltage and an auxiliary voltage to one of a lower electrode and an upper electrode.

Applicants respectfully submit that Aoki does not cure the deficiency of Wikuramanayaka. The Examiner states that “it would have been obvious to one of ordinary skill in the art at the time of the invention to mix power from three matching networks and supply mixed power to one of the electrodes as taught by Aoki in the apparatus of Wikuramanayaka to achieve improved evenness of standing wave suppression effect”. However, as stated above, in Aoki the mixed voltage is branched.

Thus, even assuming, arguendo, that Wikuramanayaka and Aoki were combined, the combination does not disclose or suggest outputting an unbranched mixed voltage of a main voltage, a bias voltage and an auxiliary voltage to one of a lower electrode and an upper electrode, as essentially recited in amended claim 1.

As such, Applicants respectfully submit that claim 1 is patentable over Wikuramanayaka in view of Aoki.

Claim 1 is allowable for additional reasons. Applicants submit that neither Wikuramanayaka, Aoki, nor any combination thereof discloses a bias frequency being lower than a main frequency, as claimed in claim 1. The lower bias frequency facilitates the control of heavy particles.

Further, for at least the reason that claims 3 and 5 depend from claim 1, claims 3 and 5 are also submitted to be patentably distinct over the cited references. Claims 4, 6 and 7 have been canceled.

Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Wikuramanayaka in view of Aoki and Quon. This rejection is moot since claim 7 has been canceled.

Reconsideration is respectfully requested of the rejections of claims 1 and 3-7 under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 6,309,978 to Donohoe et al. (“Donohoe”) in view of Aoki.

Applicants respectfully submit that neither Donohoe nor Aoki discloses or suggests outputting an unbranched mixed voltage of a main voltage, a bias voltage and an auxiliary voltage to one of a lower electrode and an upper electrode, as essentially recited in amended claim 1.

Applicants respectfully submit that Donohoe does not disclose or suggest mixing a main voltage, a bias voltage, and an auxiliary voltage. In contrast, Donohoe discloses mixing only bias power signals, not a main, a bias and an auxiliary power signal. See col. 6, lines 35-38. Thus, it follows that Donohoe does not disclose outputting an unbranched mixed voltage of a main voltage, a bias voltage and an auxiliary voltage to one of a lower electrode and an upper electrode.

Further, Applicants respectfully submit that Aoki does not disclose or suggest outputting an unbranched mixed voltage of a main voltage, a bias voltage and an auxiliary voltage to one of a lower electrode and an upper electrode. As stated above, in Aoki the mixed voltage is branched.

Thus, even assuming, arguendo, that Donohoe and Aoki were combined, the combination does not disclose or suggest outputting an unbranched mixed voltage of a main voltage, a bias voltage and an auxiliary voltage to one of a lower electrode and an upper electrode, as essentially recited in amended claim 1.

As such, Applicants respectfully submit that claim 1 is patentable over Donohoe in view of Aoki.

Claim 1 is allowable for additional reasons. Applicants submit that neither Donohoe, Aoki, nor any combination thereof discloses a bias frequency being lower than a main frequency, as claimed in claim 1. The lower bias frequency facilitates the control of heavy particles.

Further, for at least the reason that claims 3 and 5 depend from claim 1, claims 3 and 5 are also submitted to be patentably distinct over the cited references. Claims 4, 6 and 7 have been canceled.

An early and favorable reconsideration is earnestly solicited. If the Examiner has any further questions or comments, the Examiner may telephone Applicants' Attorney to reach a prompt disposition of this application.

Respectfully submitted,



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